

ABSTRACT OF THE DISCLOSURE

The present invention includes an optical fiber cable configuration comprising fibers that are grouped into buffer tubes or buffer cells, containing fiber bundles or ribbon stacks, using a lightweight fabric-type composite tape material to serve as a light-weight strength member and protective low-thermal-expansion sheath. A plurality of the buffer tubes or buffer cells of various shapes are then positioned upon another piece of composite tape material. Gel or foamy glue is placed on the tape and is used to secure the buffer tubes to the tape. A triangular or trapezoidal stack is then formed by rolling the tape to enclose the buffer tubes and excess gel serves to fill in gaps. Multiple stacks may then be stranded to form a larger super-cable structure that uses a piece of composite tape material along with the rolling process, as described above, to support the individual stacks.